

REMARKS

Please find attached a Supplemental Information Disclosure Statement Form 1449 in accordance with 37 C.F.R. §1.97(b). With regard to the above-identified application, the items of information listed on the enclosed Form 1449 which had been previously incorporated into the specification are now disclosed on a separate paper as requested.

Claims 1-21 are pending in this application.

Claim 21 was rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. As claim 21 has been amended, Applicant believes that this rejection is now moot and respectfully requests that the Examiner withdraw the rejection.

Claims 1, 5, 6, 9, 11, 12 and 16-18 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,734,533 to Nepela (“the ‘533 patent”). Applicant respectfully traverses this rejection.

The ‘533 patent describes an apparatus which is different than the present invention of claim 1. Claim 1 calls for, *inter alia*, “a top magnetic pole ... having ... a lower portion wherein the lower portion ... has a middle section that is separated from the bottom pole by the nonmagnetic gap layer by a first distance and the lower portion has end portions located at each end of the middle portion that are separated from the bottom pole by the nonmagnetic gap layer by a second distance wherein the second distance is greater than 25% and less than 100% of the first distance.”

The Examiner incorrectly characterizes several elements of the ‘533 patent which Applicant would like to clarify. First, the rejection states that element 37 of the ‘533 patent is the middle section of the lower portion of the top magnetic pole. Col. 3, line 24 of the ‘533 patent, however, clearly states that layer 37 is formed of nonmagnetic material. In fact, layer 37 is the upper of the two layers of gap material identified by the rejection as part of central gap 14. See Col 3, lines 32-33 of the ‘533 patent.

Second, the rejection incorrectly characterizes elements 16 and 18 of the ‘533 patent. The rejection states that these are end portions of the lower portion of the top magnetic pole. Col. 2, line 45 of the ‘533 patent states that 16 and 18 are side gaps and Col. 4, lines 21-22 clarify that “side gaps 16, 18 provide an effective magnetic separation” which would not be the case if they were a portion of a magnetic pole.

Because the invention of claim 1 is structurally and functionally different than the invention described in the ‘533 patent, the cited reference does not anticipate the present invention of claim 1. Because claim 1 is distinct from the cited reference, the remainder of the claims rejected on this basis, all of which are dependent upon claim 1, are also distinct and should be allowed.

Claims 1-4 and 13 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,315,469 to McNeil (“the ‘469 patent”). Applicant respectfully traverses this rejection. McNeil discloses a fixed distance across the middle and edge areas not a second distance that is greater than 25% and less than 100% of the first distance as called for by claim 1.

Because the invention of claim 1 is structurally and functionally different than the invention described in the ‘469 patent, the cited reference does not anticipate the present invention of claim 1. Because claim 1 is distinct from the cited reference, the remainder of the claims rejected on this basis, all of which are dependent upon claim 1, are also distinct and should be allowed.

Claims 2-4, 7, 8, 10, 19 and 20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,734,533 to Nepela (“the ‘533 patent”). Applicant respectfully traverses this rejection. These claims are dependent upon claim 1 and are patentable for at least the same reasons.

Claims 1, 14 and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,163,436 to Sasaki et al. (“the ‘436 patent”). Applicant respectfully traverses this rejection.

Regarding claim 1, this rejection is improper because it incorrectly characterizes the teachings of the ‘436 patent in at least three ways.

First, the rejection states that the ‘436 patent discloses a bottom magnetic pole (27), a nonmagnetic gap layer (28) deposited over the bottom magnetic pole, and a top magnetic pole (36) deposited over the nonmagnetic gap layer. Element 36 is said to have an upper and a lower portion, but no identifying numerals are given. This is because element 36, identified in the ‘436 patent as the third magnetic layer, is unitary. The ‘436 patent has no indication in the specification that the third magnetic layer is considered to have two portions. Also, the hashing (e.g. in Fig. 26a) is uniform throughout the third magnetic layer. Because the “top magnetic pole” of the ‘436 patent does not have upper and lower portions and because the rejection

provides no motivation as to why one of ordinary skill in the art would so modify the invention of the '436 patent, the rejection is improper because the '436 patent does not make this requirement of the present invention obvious.

Second, there is a significant structural difference between the third magnetic layer (36) of the '436 patent and the top magnetic pole of the present invention. As Fig. 27 of the '436 patent clearly shows, the third magnetic layer is large, fan shaped and extending well beyond and behind the bottom magnetic layer. This is clearly different than the present invention. As with the intervening material, since the rejection omits these items, it necessarily provides neither an explanation for a modification to eliminate these items, nor a motivation to do so.

Third, the rejection mischaracterizes the character of the intervening material between the position of the third magnetic layer and the bottom magnetic pole. It is true that there is a nonmagnetic gap layer 28 in the intervening space. The '436 patent also teaches, however, that there is an additional magnetic layer (29), two layers of thin film coils (32, 34) and two additional insulation layers (33, 35). Thus, unlike the invention of claim 1, the cited reference has additional magnetic sources in which should be an entirely nonmagnetic gap layer. As the rejection omits these items, it necessarily provides neither an explanation for a modification to eliminate these items, nor a motivation to do so.

Of course, because the cited reference does not provide for a true nonmagnetic gap layer, it cannot meet the requirement of the present invention of claim 1 that the second distance be greater than 25% of the first distance. Even assuming that the cited reference had an appropriate layer for the first and second distances to transit, the cited reference provides no motivation to modify the cited reference to require a second distance of greater than 25% of the first distance other than a general admonishment that one of ordinary skill in the art would want to "optimize the track width and recording properties." Such a speculative "motivation" can only lead to undue experimentation and does not provide the reasonable expectation of success that is required. Further, the motivation to specifically require a second distance of greater than 25% of the first distance when the cited reference is admitted to not disclose the relevant dimensions (other than in a Figure which may not even be to scale) can only come from impermissible hindsight.

Claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,734,533 to Nepela ("the '533 patent") in view of U.S. Patent No. 6,169,642 to Mino et al.

Claim 21 is dependent upon claim 1 and is patentable for at least the same reasons.

In view of the above, favorable reconsideration in the form of a Notice of Allowance is requested. The Examiner is invited to telephone the undersigned at (612) 336-4706 if there are any issues that prevent the allowance of this application.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 1 and 21 have been amended as shown below:

1. (Once Amended) A magnetic transducer device comprising:
a bottom magnetic pole;
a nonmagnetic gap layer deposited over said bottom magnetic pole;
a top magnetic pole deposited over the nonmagnetic gap layer, the top magnetic pole having an upper portion and a lower portion wherein the lower portion of the top magnetic pole faces a surface of the bottom magnetic pole and wherein the lower portion has a middle section that is separated from the bottom pole by the nonmagnetic gap layer by a first distance and the lower portion has end portions located at each end of the middle portion that are separated from the bottom pole by the nonmagnetic gap layer by a second distance wherein the second distance is greater than 25% and less than 100% of the first distance.

21. (Once Amended) The device of claim 6 wherein the bottom magnetic pole [layer] comprises a shared pole, a magnetic layer deposited on the shared pole wherein the magnetic layer has a width equal to the width of the device, and a nonmagnetic region deposited on the shared pole at each end of the magnetic region.